

PROJECT SUMMARY

County: Plumas

Applicant: Sierra Institute for Community and Environment

Project Title: Developing Greenville High School Natural Resources Academy's Field Research and Watershed Monitoring Program

PROJECT GOAL

The goal of this project is to develop and advance field studies and a monitoring program for the Greenville Junior Senior High School Natural Resources Academy in the fire-damaged Lights Creek Watershed and a local Caltrans wetland mitigation site.

PROJECT SCOPE

Greenville Junior Senior High School (GHS) blends math, science, English, and social studies classes with natural resource themes and local field studies to offer an integrated California standards-based Natural Resources Academy. A primary goal of the program is to improve student motivation, student learning in all subject areas, and, through rigorous natural resource-focused field studies, better connect students to their rural home and working landscape. The Sierra Institute for Community and Environment has worked closely with Plumas Unified School District and GHS teachers to launch a High School Natural Resources Academy. The 2007-2008 school year was the first year of Academy implementation. To date, most program implementation has been conceptual, integrative, and focused on programmatically linking classes through natural resource themes. A 12-member advisory body drawn from diverse local agencies and businesses, and including local Native representation, has been established. Field studies have been mostly introductory and exploratory, but appreciated by the students.

The program now needs development of a comprehensive field studies program, which is the focus of this project. Support from the Sierra Nevada Conservancy is requested to establish field studies and monitoring in 1) the Lights Creek Watershed damaged by the 65,000 acre Moonlight Fire (in the fall of 2007), and 2) a CalTrans wetland mitigation site close to school. These sites offer opportunity to establish long-term GHS fieldwork and study sites that can be linked to ongoing classes, specifically the Natural Resources Technology and Natural Resources Environmental Science classes. This work also offers opportunity for students to work with the responsible agencies and contribute to site understanding and improvement. Both the U.S. Forest Service and the Feather River Resource Conservation District have agreed to assist with the establishment of study areas, field research, and monitoring. This project will launch rigorous fieldwork that will produce data that is congruent with and contributes to agency work and understanding, and offers opportunity for meaningful student learning. Doing real work in the watershed, including restoration of the damaged Moonlight Fire area—which students have made clear they want to do, powerfully links on-the-ground action with education.

One-year funding from the Sierra Nevada Conservancy for \$85,500 is requested to establish the field studies and monitoring program for the Natural Resources Academy. The California Department of Education funded the first year of implementation, and by February of 2009 there will remain roughly \$35,000 left to fund the Academy through May of 2010, \$25,500 of which is available for this project. Approximately \$5,775 of a grant by the Plumas County Board of Supervisors to the Sierra Institute will assist this project. Considerably more in-kind support is available from Plumas Unified School District and agency staff participation. Specific project

products include: establishing study sites and a comprehensive watershed monitoring program in the lower Lights Creek and Moonlight Creek areas of the Moonlight Fire on U.S. Forest Service land and in a local Caltrans watershed mitigation site. Both will play critical roles in development of the Natural Resources Technology and Natural Resources Environmental Sciences class curricula. Field-based data collection and monitoring with mapped GIS products will be linked with resource themes and other classes at GHS. This work will result in a comprehensive natural resources/working landscape GHS program, one that can contribute to rural schools elsewhere.

LETTERS OF SUPPORT (Appendix A)

Mike Chelotti, GHS Principal (and former Plumas Unified School District Superintendent)

Robert Meacher, Supervisor, District 2

Michael Donald, District Ranger, Mt. Hough District, Plumas National Forest

SNC PROJECT DELIVERABLES AND SCHEDULE

DETAILED PROJECT DELIVERABLES	TIMELINE
<i>Establish Moonlight Fire/Lights Creek field study sites</i>	<i>Feb 09-March 09</i>
Establish draft watershed monitoring protocol and study plan	Feb 09-April 09
Report on All-School field trip to Moonlight Fire Area	May 2009
Draft Natural Resources Technology and Natural Resources Environmental Sciences classes curricula	June 09
Six month report: * Progress report on student studies *Final school-based watershed/fire monitoring and study plans * Final Natural Resources Technology and Natural Resources Environmental Sciences classes curricula	August 09
<i>Establish CalTrans site Mitigation study protocol</i>	August 09-Oct 09
Draft CalTrans site mitigation/restoration plan	November 09
Integrate CalTrans mitigation/restoration plan into classes	July 09-Jan 09
Final report on site plan work, results of student monitoring and implementation of study/restoration projects and PMs	Feb 10

SNC PROJECT COSTS

PROJECT BUDGET CATEGORIES	TOTAL SNC FUNDING
Staff Salaries and benefits to work with students and teachers, establish monitoring sites and program, track and report performance measures, oversee and report on program	\$26,250
2 Summer internships for top high school students	\$3,000
Student intern to work with teachers and staff for 8 months	\$12,000
Consultant Expenses to train teachers, establish monitoring program (some performance review), and establish class curricula	\$15,000
Field sampling and monitoring equipment and supplies	\$8,000
Vehicle for transport to and from local sites	\$10,000
Office Expenses and GIS software	\$2,450
Travel	\$1,130
Administration (.10)	\$7,670
SNC GRANT TOTAL	\$85,500